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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,461	11/07/2001	Yeshik Shin	594728117US	3693

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EXAMINER

KHUONG, LEE T

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/053,461	Applicant(s) SHIN ET AL.	
	Examiner Lee Khuong	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 12-24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 7, 11, 25 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8, 10, 12-16, 19-24, and 27 are rejected under 35 U.S.C 102(b) as being anticipated by Sonnier, (5,574,849) et al, hereinafter referred as Sonnier.

Regarding claims 1 and 19, Sonnier teaches a method and a device for transmitting control information during transmission of packets.

Transmitting symbols of the packet, the symbols of the packet including in-band symbols (see Fig. 1, col. 65, lines 40-52, **command BUSY/FILL/IDLE symbols are transmitted**); and

when control information is to-be transmitted (see col. 65, lines 48-49, **when the IDLE command symbol is about to be transmitted**), *stopping the transmitting of the symbols of the packet* (see col. 65, lines 51-52, **stopping the transmission of a message packet by sending the interrupt FILL command symbol**);

transmitting an out-of-band symbol representing the control information (see col. 65, lines 48-49, **transmitting the IDLE command symbol represents the control information**); and

after the out-of-band symbol is transmitted, continuing with the transmitting of the symbols of the packet that have not yet been transmitted (see col. 65, lines 49-51, **the**

Art Unit: 2665

transmission of the interrupted message packet is resumed after the receiving element is ready and the IDLE command symbol is transmitted).

Regarding claims 2 and 20, Sonnier teaches *the out-of-band symbol is one of two out-of-band symbols that form a primitive* (see col. 65, lines 48, **inserting interrupt IDLE symbol**).

Regarding claims 3 and 21, Sonnier teaches one symbol of the primitive has a negative disparity and the other symbol of the primitive has a positive disparity (see col. 27, Table 1, **most three significant bits determines the disparity**).

Regarding claims 4 and 22, Sonnier teaches the primitive has a neutral disparity (see col. 27, Table 1, **most three significant bits determines the disparity**).

Regarding claims 5 and 23, Sonnier teaches *the transmitting of the primitive has minimal effect on running disparity* (see col. 27, Table 1, **the command information has minimal effect on the command symbols transmissions**).

Regarding claims 6 and 24, Sonnier teaches *the transmitting of the out-of-band symbol has minimal effect on running disparity* (see col. 27, Table 1, **transmitting IDLE symbol has minimal effect**).

Art Unit: 2665

Regarding claim 8, Sonnier teaches *receiving the symbols of the packet via one port of a switch and transmitting the symbols of the packet via another port of the switch* (see col. 13, lines 19-34, **redundant communication paths between any CPUs 12, router 14A', in port 4, out port 3**).

Regarding claims 10 and 27, Sonnier teaches *the control information controls a data store device* (see col. 16, lines 39-53, col. 47, lines 1-6, **command symbols communicates between CPUs, I/O packet interfaces to transfer instructions and data of a storage device**).

Regarding claim 12, Sonnier teaches a method and a device for receiving control information while receiving a packet of symbols.

After receiving a first portion of symbols of the packet (see col. 65, lines 40-47, **the receiving side is busy during a middle of receiving a message packet**), *receiving an out-of-band symbol representing the control information* (see Fig. 1, col. 65, lines 47-49, **receiving the IDLE command symbol**); and

After receiving the out-of-band symbol, receiving a second portion of the symbols of the packet (see col. 65, lines 49-52, **resume receiving the interrupted message packet**)

Wherein the control information interrupts the reception of the packet of symbols (see col. 65, lines 41-42 and lines 51-52, **inserting the interrupt FILL command symbol**)

Regarding claim 13, Sonnier teaches *the out-of-band symbol is one symbol of primitive comprising multiple symbols* (see col. 65, lines 40-52).

Art Unit: 2665

Regarding claim 14, Sonnier teaches *the primitive comprises two out-of-band symbols* (see col. 65, lines 48-49).

Regarding claim 15, Sonnier teaches *combining the first portion of the symbols with the second portion of symbol to form the packet of symbols* (see col. 65, lines 40-52).

Regarding claim 16, Sonnier teaches *the control information is link control information* (see col. 50, lines 66-67 and col. 51, lines 1-12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 17, 18, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonnier in view of Latif et al. (6,400,730), hereinafter referred as Latif.

Regarding claims 9, 17, 18, and 26, Sonnier teaches all claimed limitations set forth in the rejection of claims 1, 12, and 19.

Art Unit: 2665

Sonnier fails to teach *the control information controls communications nodes of a storage area network*.

However, *the control information controls communications nodes of a storage area network* is known in the art for providing a reliable data packets routing in a storage network switch as evidenced by Latif.

Latif teaches *the control information controls communications nodes of a storage area network* (see Figure 1, col. 5, lines 50-67, col. 6, lines 1-5, SAN) for the purpose of providing a reliable data packets routing in a storage network switch.

One skilled in the art would have recognized the advantage of using *the control information controls communications nodes of a storage area network* as taught by Latif in the system of Sonnier for the purpose of providing a reliable data packets routing in a storage network switch.

Thus, it would have been obvious to one skilled in the pertinent art at the time the invention was made to apply Latif's teaching of the control information controls communications nodes of a storage area network in Sonnier's system with the motivation of providing a reliable data packets routing in a storage network switch.

Allowable Subject Matter

5. Claims 7, 11, 25 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior arts do not teach an in-band is transition optimized, an out-of-band is not transition optimized, the symbols of the packet can include non-

Art Unit: 2665

contiguous out-of-band symbols, the control information includes contiguous out-of-band symbols.

Response to Arguments

6. Applicant's arguments filed 09/21/04 have been fully considered but they are not persuasive. Applicant's arguments will be addressed hereinbelow in the order in which they appear in the response filed 09/21/04.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *Sonnier's "IDLE and other command symbols are sent as inter-message packet transmissions, not as intra-message packet transmissions"*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. In the Remarks of the outstanding response, on page 8, pertaining the rejection under 35 U.S.C. 102(b) of claim 1, Applicant argues "*Sonnier does not stop the transmission of data symbols of a message packet, but rather completes the transmission of a message packet before sending an IDLE or other command symbol*".

In response, Examiner respectfully disagrees. "*stopping the transmitting of the symbols of the packet*" is disclosed in col. 65, lines 51-52, (**stopping the transmission of a message packet by sending the interrupt FILL command symbol**).

9. Applicant's arguments with respect to claims 12-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Albrecht et al. (5,583,872), disclose a method and system To Transfer Data At High Speed Over Twisted Pair Cabling.

Frenzel et al. (5,400,323), disclose a method and system for Controlling The Insertion Of Stations Into FDDI Network.

Quattromani et al. (6,016,510), disclose a method and system of Torus Routing Element Error Handling And Self-Clearing With Programmable Watermarking.

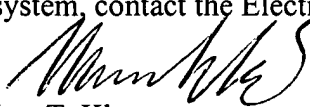
Kashyap (6438128), discloses a method and system for Alternate Use Of Data Packet Fields To Convey Information.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Khuong whose telephone number is 571-272-3157. The examiner can normally be reached on 9AM - 5PM.


12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2665

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lee T. Khuong
Examiner
Art Unit 2665



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